



# Panasonic

## Operating Instructions Wide Projection Television

Model No. **TX-47P950A**



**T**  
[tau]  
**GIGA**



Please read these instructions before operating your  
set and retain them for future reference.

TQB0A0132

# Dear Panasonic Customer

Welcome to the Panasonic family of customers. We hope that you will have many years of enjoyment from your new Wide Projection television set.

To obtain maximum benefit from your set, please read these Instructions before making any adjustments, and retain them for future reference.

Retain your purchase receipt also, and note down the Model Number and Serial Number of your set in the space provided on the rear cover of these Instructions.

## Important Information

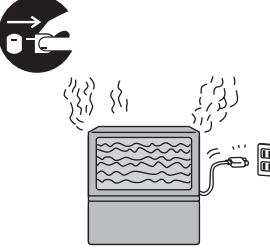
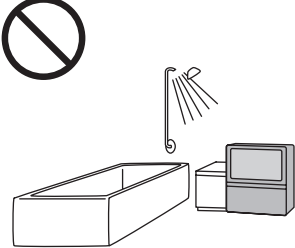

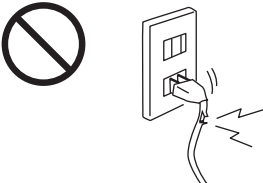
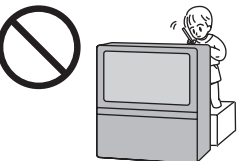
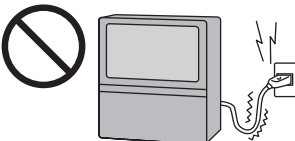
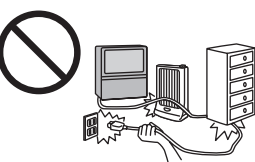
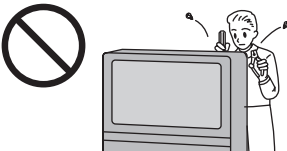


- (1) The long time (max. 2 hours) use of a TV game on this set is not recommended, since the signal from the TV game may cause damage to the picture projection tubes of the set.
- (2) Do not allow a still picture to be displayed for an extended period, as this can cause a permanent after-image to remain on the Projection TV screen.  
Examples of still pictures include logos, video games, computer images and teletext.  
If still picture cannot be avoided, reduce the brightness and contrast levels of the picture to minimize any damage that might occur.
- (3) In order to minimize any damage to the projection tubes, this set uses the PICTURE SHIFT function (Refer to page 23) to change (shift) the entire pictures approximately 2 mm every 15 minutes.

## Table of contents


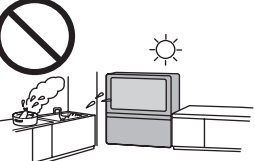
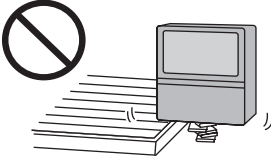
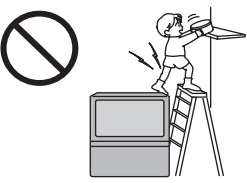
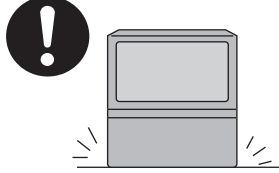
<b>Warnings and Cautions .....</b>	<b>3</b>	Sound System Selection (Different region use differing systems) ....	21
<b>Before Operating This Set .....</b>	<b>4</b>	Colour System Selection (Different region use differing systems) ....	21
Safety Precaution .....	4	<b>Owner ID .....</b>	<b>22</b>
Securing the casters .....	4	<b>Setup Adjustment .....</b>	<b>23</b>
Connecting the Aerial Cable to the RF in Terminal .....	5	OFF TIMER .....	23
Connecting Headphones .....	5	CH COLOUR SET .....	23
Connecting the Plug to the Wall Outlet .....	6	CHILD LOCK .....	23
How to Turn the Power On .....	6	BLUE BACK .....	23
Battery Installation .....	6	ILLUMINATION .....	23
Battery cautions .....	6	FLICKER REDUCTION .....	23
<b>Location of Controls .....</b>	<b>7</b>	3D-COMB .....	23
Controls and Terminals on the TV .....	7	PICTURE SHIFT .....	23
<b>Connections .....</b>	<b>8</b>	COLOUR SYSTEM .....	23
How to connect the "AV1, 2, 3 or 4" Input Terminals ....	8	VCR/GAME .....	23
How to connect the DVD Input Terminals .....	9	COLOUR MATRIX .....	23
How to connect the AV Monitor Output Terminals to other equipment ....	9	<b>Picture Adjustment .....</b>	<b>24</b>
<b>General Operation .....</b>	<b>10</b>	<b>Sound Adjustment .....</b>	<b>26</b>
<b>On-Screen menu Display from Remote Control .....</b>	<b>12</b>	<b>Aspect Controls .....</b>	<b>28</b>
<b>Convergence Adjustment .....</b>	<b>14</b>	<b>Multi Screen .....</b>	<b>29</b>
Convergence Adjustment mode .....	14	Multi PIP .....	29
Convergence 1 Adjustment for RED, BLUE and GREEN .	14	Channel Search .....	30
Convergence 2 Adjustment for RED and BLUE .....	15	<b>TELETEXT .....</b>	<b>31</b>
<b>Tuning Channels .....</b>	<b>15</b>	<b>Advanced Remote Control Operation .....</b>	<b>33</b>
Channel Selection .....	16	Stereo Bilingual Sound Selection .....	34
Channel Allocation .....	17	VCR / DVD Control .....	34
Automatic Tune .....	18	Manufacturer setting .....	35
Manual Tune .....	19	<b>Troubleshooting .....</b>	<b>36</b>
Fine Tuning .....	20	<b>Cleaning .....</b>	<b>37</b>
How to Cancel the Fine Tuning .....	20	<b>Specifications .....</b>	<b>38</b>
Programme Number Skip .....	20		
How to Cancel the Skip Function .....	21		

# Warnings and Cautions

## ⚠ Warnings




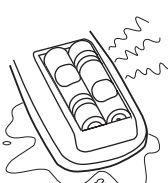

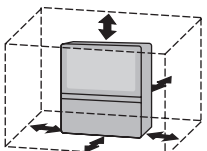



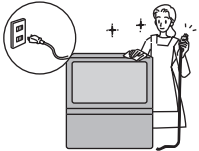

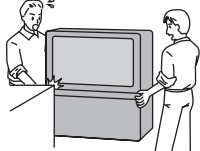

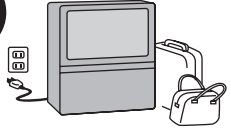

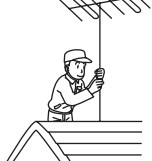
	Unplug the power cord in the event of any malfunction (screen goes blank, no sound, odd sounds, smoke or unusual odors coming from the unit). Unplug the power cord if foreign matter or water falls into the unit, or if the unit is dropped or the cabinet is damaged.		DO NOT use this unit near water. (Near a bathtub, etc.)
	DO NOT place any of the following on the unit: Flower vases, flower pots, cups, small metal objects, or cosmetics containers, chemicals or water.		DO NOT use if the power cord or power plug is damaged, or if the plug does not fit tightly into the socket.
	DO NOT insert foreign objects (metal or easily flammable objects).		DO NOT use at a voltage other than indicated.
	TAKE CARE NOT to damage the power cord.		DO NOT remove the rear cover as live parts and High Voltage components are accessible when the rear cover is removed.
	DO NOT touch the aerial cable and this unit when there is lightning.		DO NOT touch the power plug if your hands are wet.

## ⚠ Cautions

 After-images appear	Do not allow a still picture to be displayed for an extended period, as this can cause a permanent after-image to remain on the Wide Projection TV screen. Examples of still pictures include logos, video games, computer images, teletext and images displayed in 4:3 mode. <b>Note:</b> The permanent after-image on the Wide Projection TV screen resulting from fixed image use is not an operating defect and as such is not covered by the Warranty. This product is not designed to display fixed images for extended periods of time.		
	DO NOT place in humid or dusty location, or areas exposed to smoke or steam. DO NOT place in direct sunlight and other sources of direct heat.		DO NOT place in an unstable location.
	DO NOT stand, or place heavy objects on the unit. Particular care should be taken by families with small children.		Place in a safe location.  Fix the TV to a wall. (refer to page 4)

## Warnings and Cautions

### Cautions

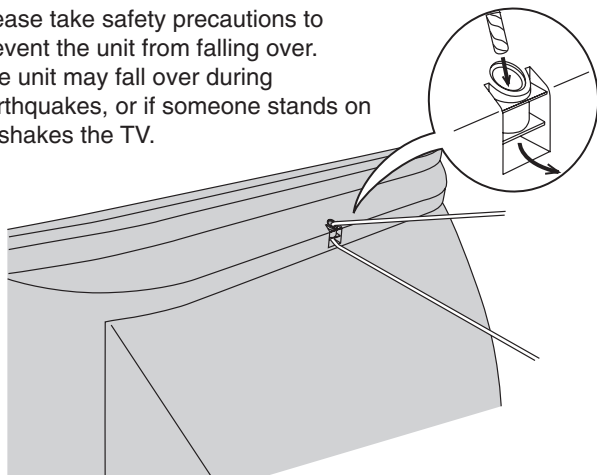
 	<p>When inserting batteries, ensure that the polarities (positive and negative) are correctly aligned. Insert as shown on remote control. If inserted incorrectly, battery fluid may leak, and fire, injury, or damage to surrounding components may result.</p>	 	<p>Do not mix new and old batteries. Use only the specified batteries. Failure to follow this precaution may result in leakage of battery fluid. Fire, injury, or damage to surrounding components may also result.</p>
 	<p>Adequate ventilation is essential to prevent failure of electrical components, we recommend that a gap of at least 10 cm ( <math>\longleftrightarrow</math> ) is left all around this unit even when it is placed inside a cabinet or between shelves.</p>	 	<p>Turn the power "Off" before connecting other electrical equipment.</p>
 	<p>Before cleaning, unplug the power plug from the socket.</p>	 	<p>DO NOT joint the unit.</p>
 	<p>Unplug the power plug from the socket if you are not going to use the unit for an extended period.</p>	 	<p>Ask your sales outlet to install the aerial.</p>

To ensure continued excellent performance by this product, periodic cleaning is recommended. See page 37 for more information.

## Before Operating This Set

### Safety Precaution

Please take safety precautions to prevent the unit from falling over. The unit may fall over during earthquakes, or if someone stands on or shakes the TV.

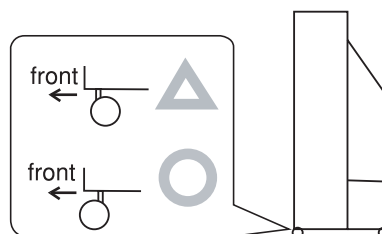


#### Fixing to a wall

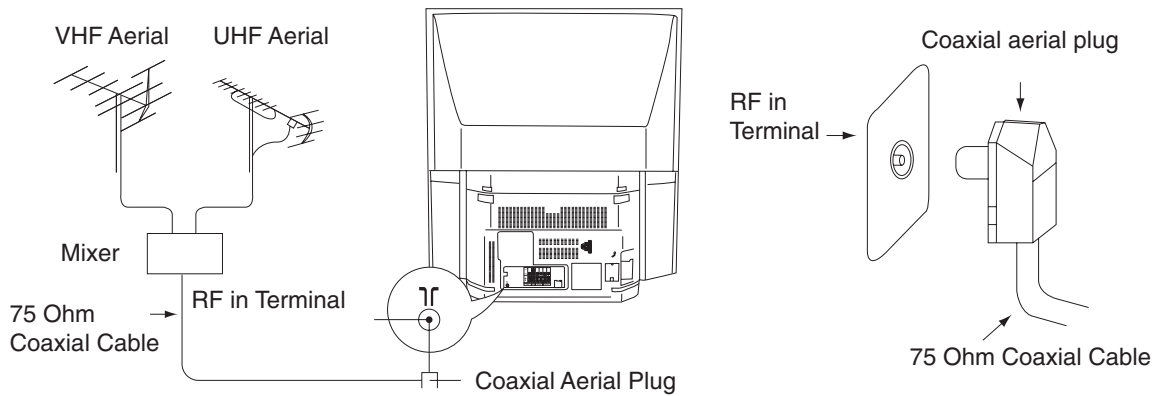
Use a strong rope or a chain to fasten the TV firmly to a strong support such as a wall or a pillar.

### Securing the casters

To prevent the set from tipping forward, turn the two casters on the front of the TV so they face forward, as shown in the picture.



## Connecting the Aerial Cable to the RF in Terminal



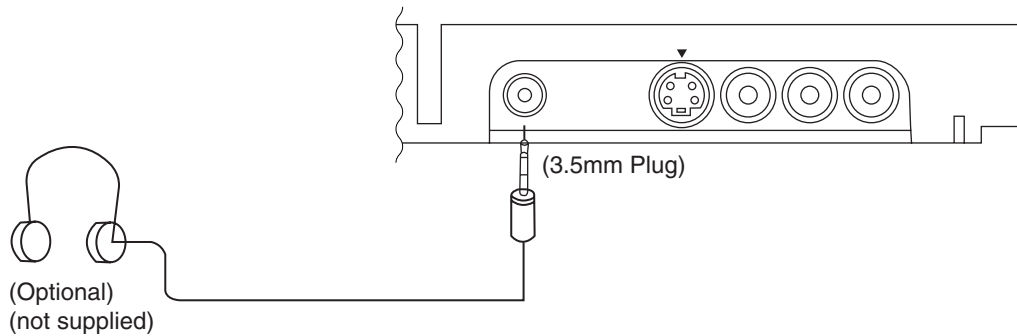
To obtain optimum quality picture and sound, an Aerial, the correct cable (75 Ohm coaxial) and the correct terminating plug are required. If a communal Aerial system is used, you may require the correct connection cable and plug between the wall Aerial socket and your set.

Your local Television Service Centre or Dealer may be able to assist you in obtaining the correct Aerial system for your particular area and accessories required.

Any matters regarding Aerial installation, upgrading of existing systems or accessories required, and the costs incurred, are the responsibility of you, the Customer.

## Connecting Headphones

Connect headphones as follows.



You can listen to sound from the headphones plugs as shown below.

Screen condition		Speaker Sound	Headphones	Monitor Output
Single picture/Teletext	A	A (Stereo)	A (Stereo)	A (Stereo)
Picture in Picture	A B	A (Stereo)	A (Stereo)	A (Stereo)
Picture and Picture	A B	A (Stereo)	A (Stereo)	A (Stereo)

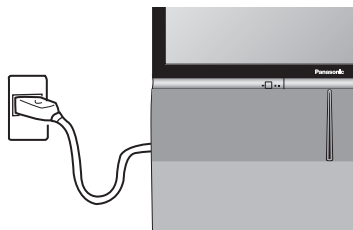
### Headphones plug:

When a Headphones plug is inserted into the Headphones socket, all speakers will be automatically disconnected; only the Headphones will function.

Use Volume Up “+” or Down “-” button to control volume level.

## Before Operating This Set

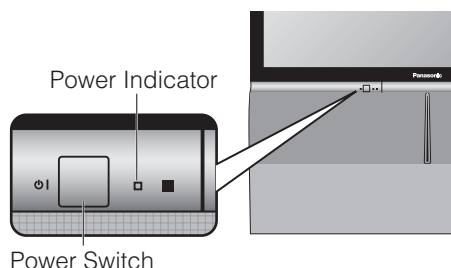
### Connecting the Plug to the Wall Outlet



#### Notes:

- Main plug types vary between countries. The main plug shown at left may therefore not be the type fitted to your set.
- The On/Off switch on this model does not fully disconnect the TV from the mains supply.

### How to Turn the Power On



#### Power OFF

□ Power Indicator  
No light: Power OFF condition

**Note:** Even when the Power Switch is "OFF", the TV set will still consume a small amount of power.

#### Power ON

Push the Power switch on Television to turn the set on.

□ Power Indicator  
No light: Normal viewing condition  
Red : Stand by

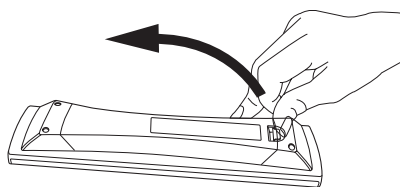
#### Notes:

- When in the Stand-by condition (Refer to page 11), it is also possible to turn the TV set on by pressing any of the "Direct Programme Number Selection buttons" (0 - 9) or "Programme Number Up or Down buttons" on the TV set or on the Remote Control.
- If the Wall Outlet is switched OFF or the Main Plug is unplugged, when the TV set is again turned ON (by either connecting the Main Plug to the Wall Outlet or switching the Wall Outlet ON), it will have returned to the original state.

### Battery Installation

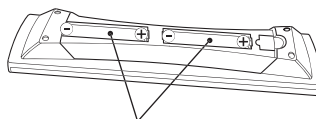
#### 1 Open the cover.

Pull and hold the hook, then open the battery cover.



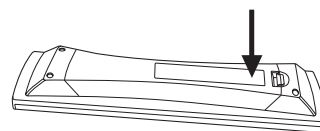
#### 2 Batteries: Use two "R6 (AA)" size batteries.

Insert the batteries ensuring the correct polarities. This is identifiable by the "+" and "-" symbols on the batteries and inside the battery compartment.



Two "R6 (AA)" size

#### 3 Replace the cover.



#### Note:

- Do not use rechargeable (Ni-Cd) batteries.
- They are different in shape and performance and may fail to ensure correct operation.

### Battery cautions

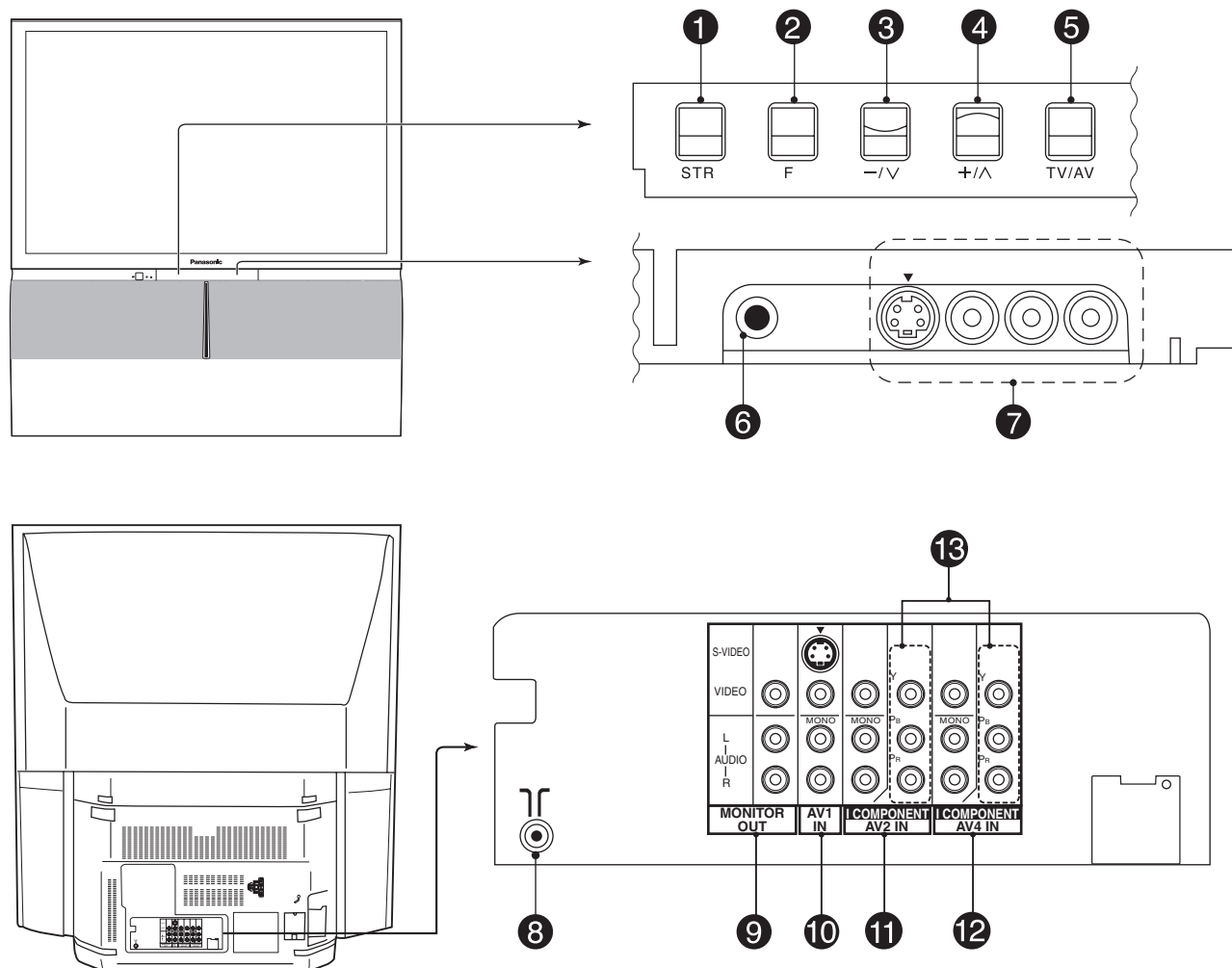
The incorrect use of batteries can cause electrolyte leakage which will corrode the Remote Control or cause the batteries to burst.

#### Observe the following precaution:

1. Batteries shall always be replaced as a pair. Always use new batteries when replacing the old set.
2. Do not combine a used battery with a new one.
3. Do not mix battery types (example: "Zinc Carbon" with "Alkaline").
4. Do not attempt to charge, short-circuit, disassemble, heat or burn used batteries.
5. Battery replacement is necessary when remote control acts sporadically or stops operating the TV set.

# Location of Controls

## Controls and Terminals on the TV



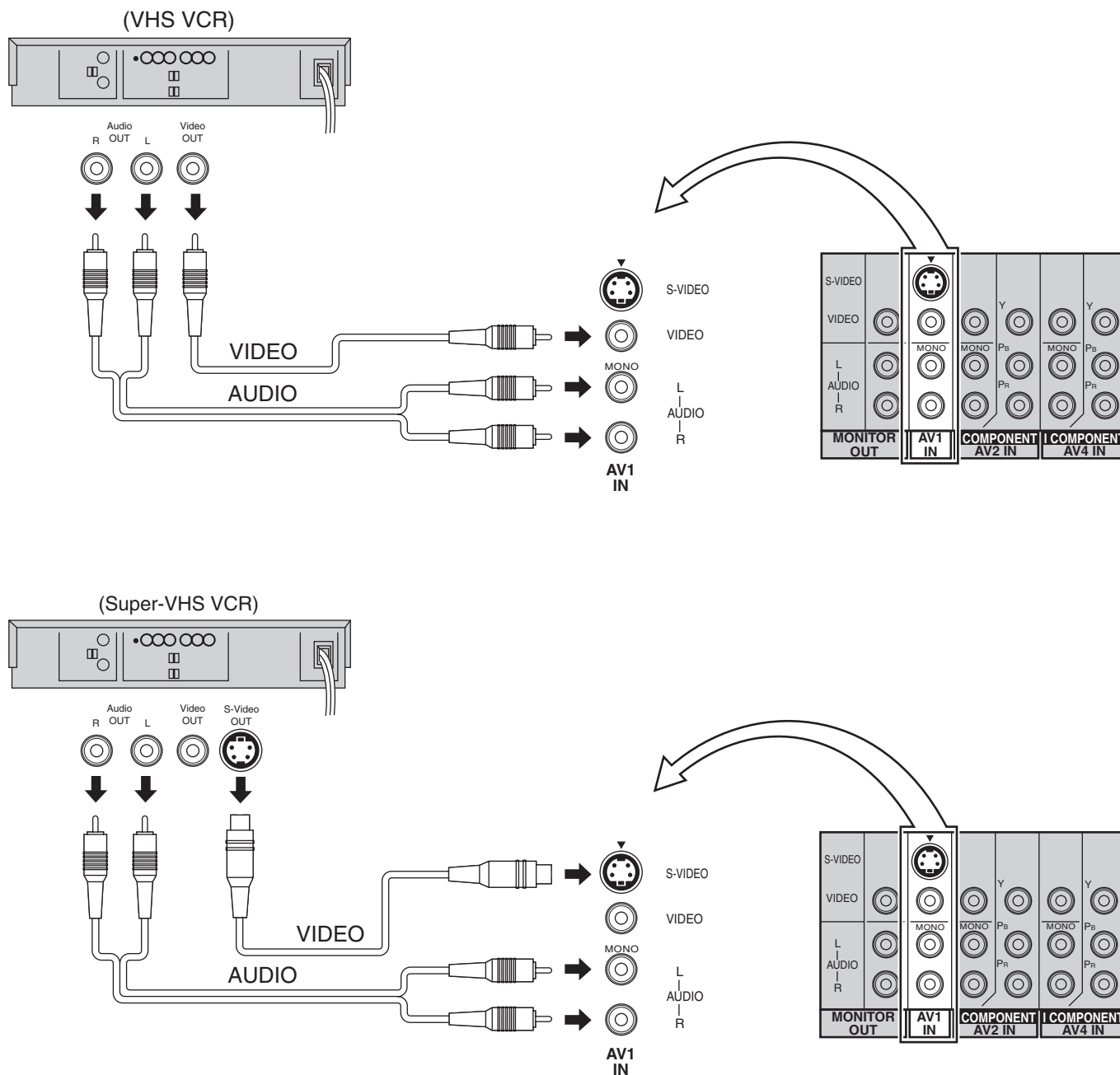
Item No.	Function	Refer to Page	Item No.	Function	Refer to Page
1	STR	10	7	AV3 Input Terminals	8
2	Function Selection	10	8	Aerial Terminal (RF In Terminal)	5
3	Volume Down (-) / Programme Number Down ( v )	10	9	Monitor Output Terminals	9
4	Volume Up (+) / Programme Number Up ( Λ )	10	10	AV1 Input Terminals	8
5	TV/AV Selection	10	11	AV2 Input Terminals	8
6	Headphones Jack	5	12	AV4 Input Terminals	8
			13	DVD ( Y. P <sub>B</sub> . P <sub>R</sub> ) Input	9



# Connections

## How to connect the “AV1, 2, 3 or 4” Input Terminals

Connect VCRs and other peripheral equipment

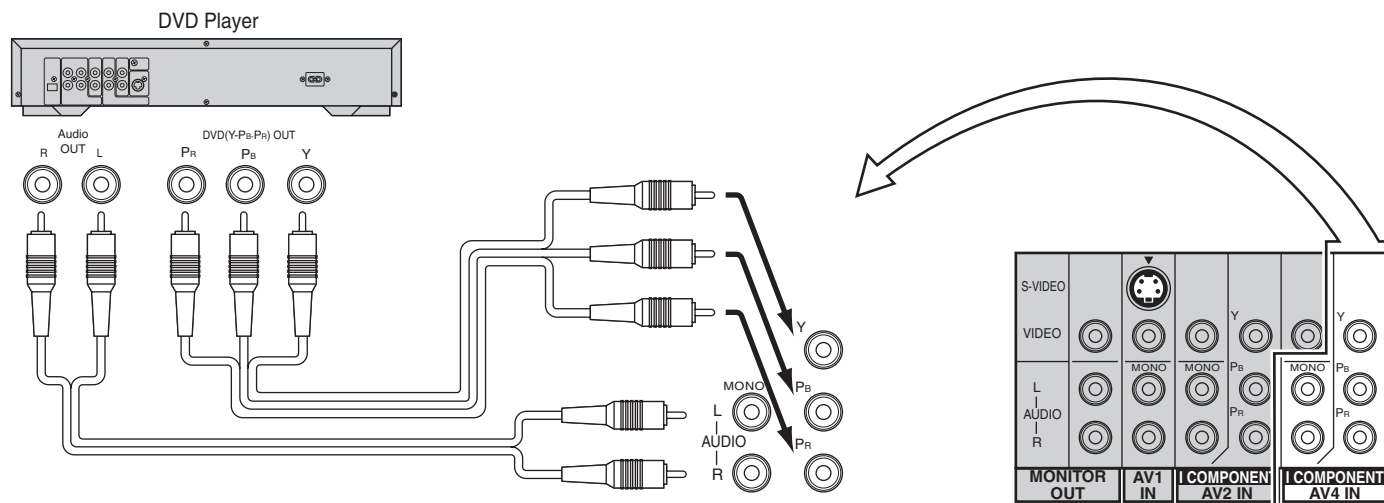


### Notes:

- When an S-Video cable is connected to the S Video terminal, the corresponding Video input will be switched off and the signal from the S-Video input will be used.
- When a Monaural VCR is used, connect the Monaural Audio cable to the Audio “L” (Left) terminal.
- Select the desired AV input position by pressing the TV/AV button. (Refer to page 10)
- Input 3 is located on the front of the unit.
- The AV2 and AV4 audio input terminals serve as the audio input terminal for both the Video input and the DVD input.



## How to connect the DVD Input Terminals

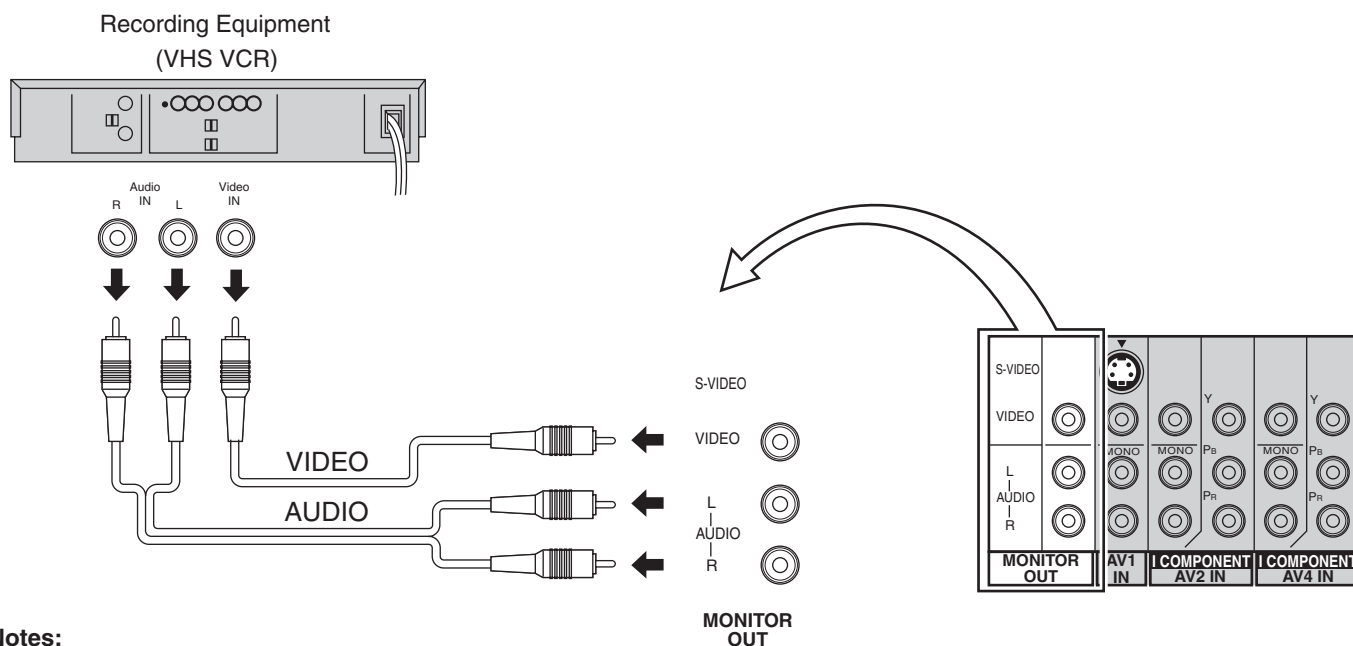


### Notes:

- The AV4 audio signal is common for both AV4 and DVD input signal terminals.
- The DVD signal input terminal takes priority over the AV4 video signal input terminal.
- Similar connection are available at the COMPONENT VIDEO input 2 terminal.

## How to connect the AV Monitor Output Terminals to other equipment

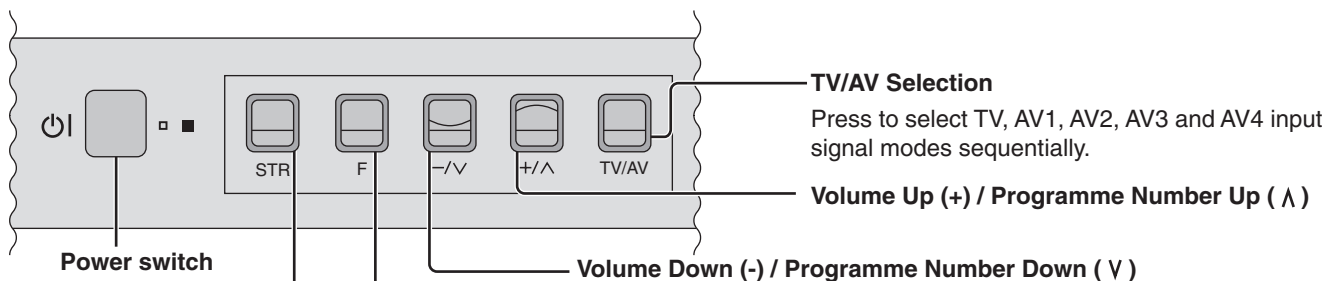
The "Monitor Out" Terminals output the same signals as main picture on the TV screen and sound from the speaker at that time, e.g. TV programmes or signals from AV1, AV2, AV3 or AV4 input.



### Notes:

- Never connect the same video recorder with both the VIDEO IN and MONITOR OUT terminals on this TV set, as this could cause incorrect operation.
- The monitor output emits the main picture normal video and audio signals.
- Teletext display on screen will not be output at the MONITOR OUT terminals.
- Even if the television is in picture-in-picture condition, MONITOR OUT terminals output the same signals as main picture on the screen and sound from speakers. Sub picture including still, channel search, etc. will not be output at the MONITOR OUT terminals.
- The DVD signal (Y, Pb, Pr) is not output at the MONITOR out terminals.

# General Operation

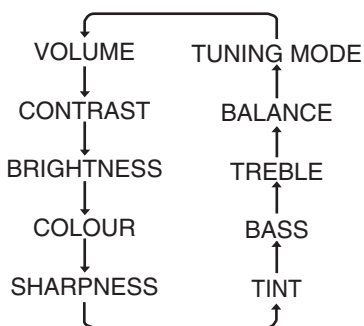


## STR

Used to store tuning and other function settings. Also used to start the menu demonstration.

## Function selection

Displays the on screen display functions, use repeatedly to select from the available functions. The following adjustments can be accessed directly.



## Notes:

- **TINT:**  
Displayed when receiving NTSC and YUV625i signals.
- **TUNING MODE :**  
Not displayed during AV mode.

## Sound Mute

Press to mute the sound completely the “Mute” symbol will appear. Press again to restore the previous sound level, and cancel the mute.

## Stereo/Bilingual Sound Selection

(see page 34)

## R-Tune

Press to switch to previously viewed channel or input mode.

## Volume Adjustment

Press to increase or decrease the sound volume level.

## Menu

Press to access the **PICTURE**, **SOUND** and **SETUP** menus. (see page 13, 23-26)

## Coloured buttons used for

**Multi Screen functions** (see page 29)

**Teletext functions** (see page 31)

**AV selection** (see page 11)

## TV/TEXT Selection

(see page 31)

## TEXT Favorite Page Selection

(see page 32)

## Recall

Press to display the current system status, for example, Programme number, Channel number, Stereo mode, Picture menu, Sound menu, Scan mode, Sound system and colour system.

## Power (Stand-by) (see page 6)

The TV set must first be plugged into the wall outlet and turned on at the power switch. Press this button to turn the TV set On from Standby mode, press it again to turn the TV set OFF to Standby mode.

## Note:

- It is also possible to turn the TV set on from STANDBY mode by pressing the "Direct Programme Number Selection" Buttons (0-9) and the "Programme Number Up or Down" Button, either on the set or on the Remote Control.

**Off timer** (see page 23)

**Multi Screen** (see page 29)

**Aspect** (see page 28)

**Surround** (see page 26, 27)

**Normalization** (see page 25, 27)

**Programme Number Selection**  
Press to select the next higher or lower Programme number.

Press to store settings in Tuning menu.

## TV/AV Mode Selection

Press to select TV, AV1, AV2, AV3 and AV4 input signal modes sequentially.

Remote control :

TV/AV

AV1	AV2	AV3	AV4
-----	-----	-----	-----

Press to display AV1 - AV4 at the bottom of the screen. Each coloured button corresponds to each input signals. For example, pressing the Red button selects AV1.

**TEXT hold** (see page 32)  
**/Still** (see page 29)

**TEXT Index** (see page 33)  
**/Channel Search** (see page 30)

## Direct programme Number

**• Direct Programme Number Selection**  
You can select the number directly by pressing the corresponding programme number buttons.

Programme Number 8..... 8  
Programme Number 36.... 3 6  
Programme Number 124... 1 2 4

## Note:

- When the Skip setting for Programme Number 100 through 125 is on, the channel selection time will be shortened, and thus you can not input three digits at a time.

**VCR/DVD CONTROL**  
(see page 34)



# On Screen menu Display from Remote Control

Many features available on this TV can be accessed via the On Screen Display menu system. Use the remote control as shown below to access and adjust features as desired.



The MENU button is used to open the main menus and also to return to the previous menu.



The up and down cursor buttons are used to move the cursor and select menus.



The left and right cursor buttons are used to access menus, adjust levels or to select from a range of options.



The OK button is used with a number of features to store settings after adjustments have been made or options have been set.



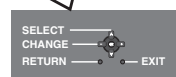
The TV/AV button is used to exit the menu system and return to the normal viewing screen.

An On Screen Help box is displayed whenever a menu is displayed on the TV. This Help box indicates which buttons on the remote control are used to navigate the menu shown, see above for descriptions of button functions.

## Note:

The Help box is not shown in the menu pictures in this instruction book due to space limitations.

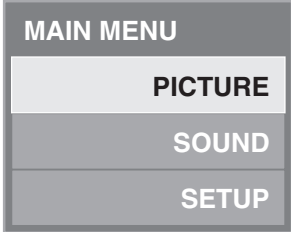
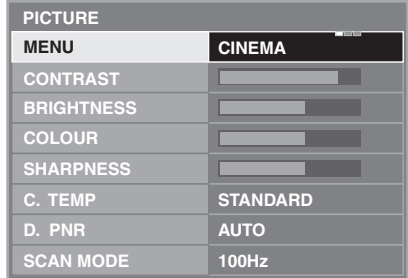
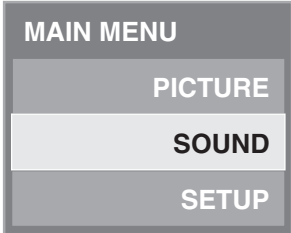
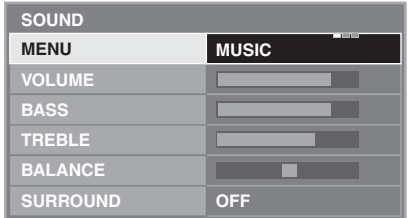
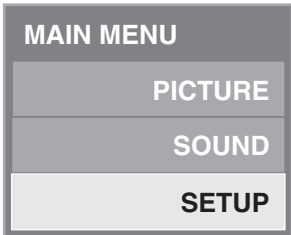
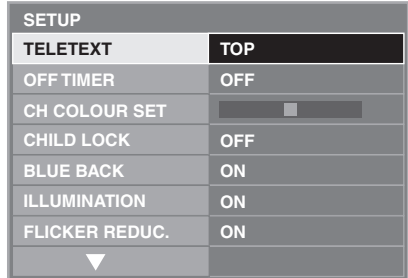
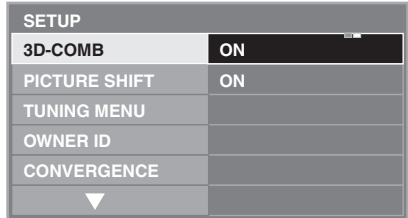
## ON SCREEN HELP 'Instructions' box



SOUND	
MENU	MUSIC
VOLUME	[Slider]
BASS	[Slider]
TREBLE	[Slider]
BALANCE	[Slider]
SURROUND	OFF

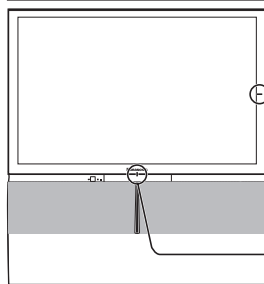
## On Screen menu Display from Remote Control

When the "MAIN MENU" (EXIT) button is pressed at the Main Menu screen, the screen display will return to the normal viewing condition. When the "MAIN MENU" (EXIT) button is pressed at each MENU screen (Picture, Sound, Setup), the screen display will return to the Main Menu screen.

Menu	On Screen Indication	
Picture menu		 <p>(see page 24)</p>
Sound menu		 <p>(see page 26)</p>
Setup menu		  <p>(see page 23)</p>

# Convergence Adjustment

## Convergence Adjustment mode



Vertical centre marker  
Horizontal centre marker

Prior to adjustment, tune the broadcast signal to the video input signal and operate the set for more than 60 minutes. If the location or direction of the set is changed or moved, the display may be out of alignment. If necessary, carry out the following procedures once with PAL signal and again with the NTSC signal.

- 1** **MENU**  
Press to display the MAIN MENU, and then to the SETUP menu.

SETUP MENU	
3D-COMB	ON
PICTURE SHIFT	ON
TUNING MENU	
OWNER ID	
CONVERGENCE	ACCESS

- 2**  
Press to select the "CONVERGENCE".  
Press to access to the "CONVERGENCE" menu.

- 3**  
Press to select the "CONVERGENCE 1" or the "CONVERGENCE 2".  
Press to access to the function.

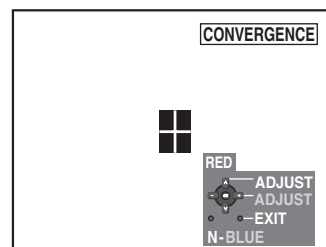
Example:  
CONVERGENCE 1  
is selected.

CONVERGENCE 1	ACCESS
CONVERGENCE 2	

## Convergence 1 Adjustment for RED, BLUE and GREEN

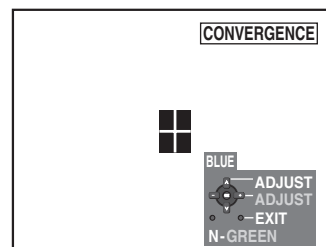
### RED

- Press to align the horizontal red line with the horizontal blue line.  
(Becomes a white line)  
Press to align the vertical red line with the vertical blue line.  
(Becomes a white line)  
Press "N" button to adjust the blue mode.  
(Stores RED)



### BLUE

- Press to align the horizontal blue line with the horizontal yellow line.  
(Becomes a white line)  
Press to align the vertical blue line with the vertical yellow line.  
(Becomes a white line)  
Press "N" button to adjust the green mode.  
(Stores BLUE)



Only when you cannot adjust with RED and BLUE proceed to the following GREEN adjustment.

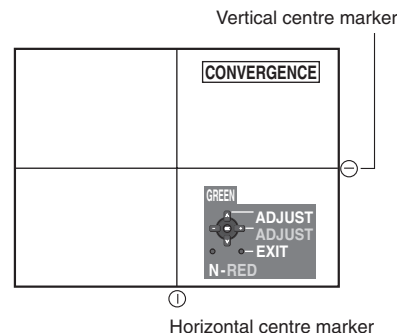
### GREEN

Repeat above adjustment for each position.

- Press to align the horizontal green line with the vertical centre maker.  
Press to align the vertical green line with the horizontal centre maker.  
Press "N" button to adjust the red mode. (Stores GREEN)

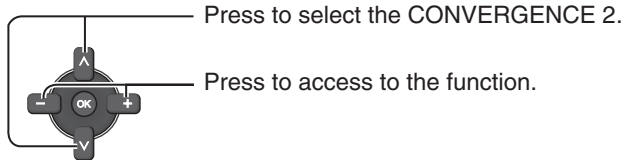
TV/AV

- Press at any time to return to the normal viewing.



## Convergence 2 Adjustment for RED and BLUE

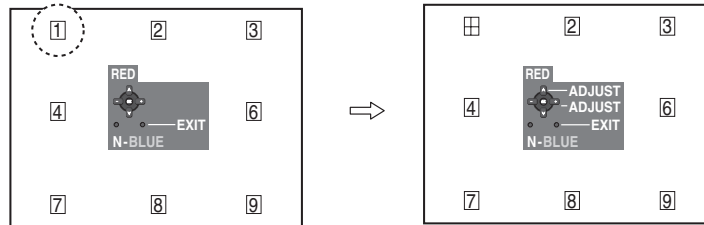
This function adjust the convergence of the side part of the screen.



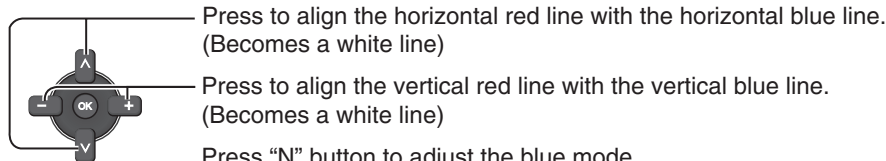
CONVERGENCE 1	
CONVERGENCE 2	ACCESS



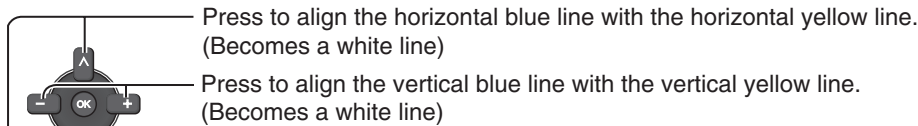
Press the Number button on the Remote Control to select the position which you would like to adjust.  
(Example) Position 1 is selected.



### RED

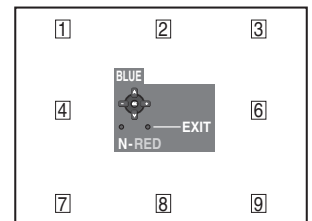
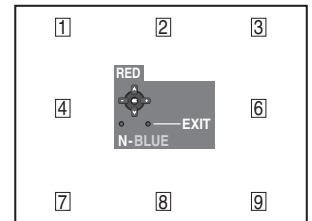


### BLUE



TV/AV

Press to return to the normal viewing. (Stores BLUE)

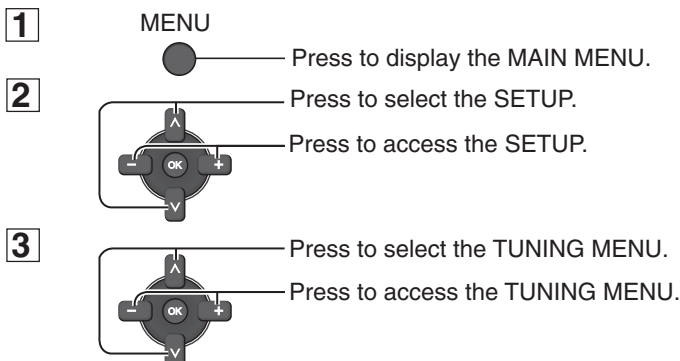


### Note:

If you wish to view a video with a different colour system (PAL / SECAM, NTSC), repeat the steps above while displaying a picture.

## Tuning Channels

### 1 Display the TUNING MENU



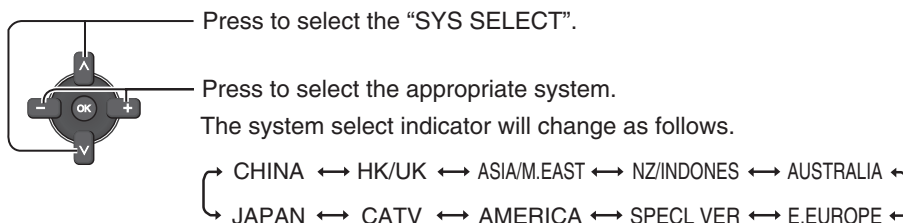
SETUP			
TELETEXT	TOP		
OFF TIMER	OFF		
CH COLOUR SET			
CHILD LOCK	OFF	SETUP	
BLUE BACK	ON	3D-COMB	ON
ILLUMINATION	ON	PICTURE SHIFT	ON
FLICKER REDUC.	ON	TUNING MENU	ACCESS
		OWNER ID	
		CONVERGENCE	

TUNING MENU	
SYS SELECT	AUSTRALIA
AUTO TUNE	
MANUAL TUNE	
SOUND SYS	5.5 MHz
COLOUR SYS	AUTO
FINE TUNE	
SKIP	OFF



# Tuning Channels

## Regional System Selection



TUNING MENU	
SYS SELECT	AUSTRALIA
AUTO TUNE	
MANUAL TUNE	
SOUND SYS	5.5 MHz
COLOUR SYS	AUTO
FINE TUNE	
SKIP	OFF

### System Select by Regional

SYSTEM SELECT	Region	SYSTEM SELECT	Region
CHINA	China	E.EUROPE	CIS, Poland, etc.
HK / UK	Hong Kong, United Kingdom	SPECL VER	South Africa
ASIA/M.EAST	Malaysia, Singapore, Thailand, Asia countries, Kuwait, Saudi Arabia, United Arab Emirates, Middle East countries, etc.	AMERICA	U.S.A., Chile, Mexico, Panama, Peru, Philippines, Taiwan, Venezuela, etc.
NZ / INDONES	New Zealand, Indonesia, etc.	CATV	USA CATV
AUSTRALIA	Australia	JAPAN	Japan

## Channel Selection

### DIRECT SELECT

When the Auto Tune is performed, the unit memories the programme number which is the same as the channel tuned. This method allows you to select the desired channel by pushing the channel display number directly on the remote control to select the station. The channel display numbers for the broadcast stations in each region are listed on page 17.

Example	Programme Number	Channel Display	Received Channel
	1	—	—
	2	2	2
	3	—	—
	4	4	4
	5	—	—
	6	6	6
	7	—	—
	8	8	8
	9	—	—
	10	10	10
	⋮	⋮	⋮
	20	20	20
	⋮	⋮	⋮

## Channel Allocation

- CATV (USA CATV) channel numbers as recommended by the joint EIA/NCTA Engineering committee and published as EIA INTERIM STANDARD No.6-CABLE TELEVISION CHANNEL IDENTIFICATION PLAN-MAY 1983.
- The receiving channels are as follows;

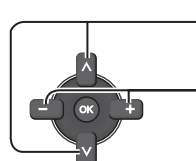
SYS SELECT	CHINA	HK/UK	ASIA/M.EAST	NZ/INDONES	AUSTRALIA	E.EUROPE	SPECL VER	AMERICA	CATV	JAPAN
CH DISPLAY	RECEIVE CHANNEL									
0	—	—	—	—	—	—	—	—	—	—
1	1	—	—	1	0	1	1	—	1	1
2	2	—	—	2	1	2	2	2	2	2
3	—	—	—	—	2	—	—	—	—	—
4	—	—	—	—	3	—	—	—	—	—
5	—	—	—	—	4	—	—	—	—	—
6	—	—	—	—	5	—	—	—	—	—
7	—	—	—	—	S2	—	—	—	—	—
8	—	—	—	—	—	—	—	—	—	—
9	—	—	—	—	—	—	—	—	—	—
10	—	—	—	—	—	—	—	—	—	—
11	—	—	11	11	—	11	11	—	—	—
12	12	—	12	—	—	12	12	—	—	12
13	13	—	—	—	—	—	13	13	—	13
14	—	—	—	—	—	—	—	14	—	—
15	—	—	—	—	S10	—	—	—	—	—
16	—	—	—	—	6	—	—	—	—	—
17	—	—	—	—	—	—	—	—	—	—
18	—	—	—	—	—	—	—	—	—	—
19	—	—	—	—	9	—	—	—	—	—
20	—	—	—	—	9A	—	—	—	—	—
21	—	21	21	21	10	21	21	—	—	—
22	—	—	—	—	11	—	—	—	—	—
23	—	—	—	—	12	—	—	—	—	—
24	—	—	—	—	S11	—	—	—	—	—
25	—	—	—	—	—	—	—	—	—	—
26	—	—	—	—	—	—	—	—	—	—
27	—	—	—	—	—	—	—	—	—	—
28	—	—	—	—	—	—	—	—	—	—
29	—	—	—	—	—	—	—	—	—	—
30	—	—	—	—	—	—	—	—	—	—
31	—	—	—	—	—	—	—	—	—	—
32	—	—	—	—	—	—	—	—	—	—
33	—	—	—	—	—	—	—	—	—	—
34	—	—	—	—	—	—	—	—	—	—
35	—	—	—	—	—	—	—	—	—	—
36	—	—	—	—	—	—	—	—	—	—
37	—	—	—	—	—	—	—	—	—	—
38	—	—	—	—	—	—	—	—	—	—
39	—	—	—	—	—	—	—	—	—	—
40	—	—	—	—	—	—	—	—	—	—
41	—	—	—	—	—	—	—	—	—	—
42	—	—	—	—	—	—	—	—	—	—
43	—	—	—	—	—	—	—	—	—	—
44	—	—	—	—	—	—	—	—	—	—
45	—	—	—	—	—	—	—	—	—	—
46	—	—	—	—	—	—	—	—	—	—
47	—	—	—	—	—	—	—	—	—	—
48	—	—	—	—	—	—	—	—	—	—
49	—	—	—	—	—	—	—	—	—	—
50	—	—	—	—	—	—	—	—	—	—
51	—	—	—	—	—	—	—	—	—	—
52	—	—	—	—	—	—	—	—	—	—
53	—	—	—	—	—	—	—	—	—	—
54	—	—	—	—	—	—	—	—	—	—
55	—	—	—	—	—	—	—	—	—	—
56	—	—	—	—	—	—	—	—	—	—
57	57	—	—	—	S44	—	—	—	—	—
58	—	—	—	—	20	—	—	—	—	—
59	—	—	—	—	21	—	—	—	—	—
60	—	—	—	—	—	—	—	—	—	—
61	—	—	—	—	—	—	—	—	—	—
62	—	62	62	62	—	62	62	62	62	62
63	—	63	63	63	—	63	63	63	63	C13
64	—	—	—	—	—	—	—	—	—	—
65	—	—	—	—	—	—	—	—	—	—
66	—	—	—	—	—	—	—	—	—	—
67	—	—	—	—	—	—	—	—	—	—
68	—	—	—	—	—	—	—	—	—	—
69	—	69	69	69	—	69	69	69	—	—
70	—	—	—	—	—	—	—	—	—	—
71	—	—	—	—	—	—	—	—	—	—
72	—	—	—	—	—	—	—	—	—	—
73	—	—	—	—	—	—	—	—	—	—
74	—	S'1	S'1	S'1	—	S'1	S'1	—	—	—
75	—	S'2	S'2	S'2	—	—	S'2	—	—	—
76	—	S'3	S'3	S'3	—	—	S'3	—	—	—
77	—	—	—	—	—	—	—	—	—	—
78	—	—	—	—	—	—	—	—	—	—
79	—	—	—	—	—	—	—	—	—	—
80	—	S1	S1	S1	—	S1	S1	—	—	—
81	Z1	S2	S2	S2	—	S2	S2	—	—	—
82	—	—	—	—	—	—	—	—	—	—
83	—	—	—	—	—	—	—	—	—	—
84	—	—	—	—	—	—	—	—	—	—
85	—	—	—	—	—	—	—	—	—	—
86	—	—	—	—	—	—	—	—	—	—
87	—	—	—	—	—	—	—	—	—	—
88	—	—	—	—	—	—	—	—	—	—
89	Z9	S10	S10	S10	—	S10	S10	—	—	—
90	Z10	S11	S11	S11	—	S11	—	—	—	—
91	Z11	S12	S12	S12	—	S12	—	—	—	—
92	Z12	S13	S13	S13	—	S13	—	—	—	—
93	Z13	S14	S14	S14	—	S14	S14	—	—	—
94	Z14	S15	S15	S15	—	S15	S15	—	—	—
95	Z15	S16	S16	S16	—	S16	S16	—	—	—
96	Z16	S17	S17	S17	—	S17	S17	—	—	—
97	Z17	S18	S18	S18	—	S18	S18	—	—	—
98	Z18	S19	S19	S19	—	S19	S19	—	—	—
99	Z19	S20	S20	S20	—	S20	S20	—	99	C49
100	Z20	S21	S21	S21	—	S21	S21	—	100	—
101	—	—	—	—	—	—	—	—	—	—
102	—	—	—	—	—	—	—	—	—	—
103	—	—	—	—	—	—	—	—	—	—
104	—	—	—	—	—	—	—	—	—	—
105	—	—	—	—	—	—	—	—	—	—
106	—	—	—	—	—	—	—	—	—	—
107	—	—	—	—	69	—	—	—	—	—
108	—	—	—	—	—	—	—	—	—	—
109	—	—	—	—	—	—	—	—	—	—
110	—	—	—	—	—	—	—	—	—	—
111	—	—	—	—	—	—	—	—	—	—
112	—	—	—	—	—	—	—	—	—	—
113	—	—	—	—	—	—	—	—	—	—
114	—	—	—	—	—	—	—	—	—	—
115	—	—	—	—	—	—	—	—	—	—
116	—	—	—	—	—	—	—	—	—	—
117	Z37	—	—	—	—	—	—	—	—	—
118	—	—	—	—	—	—	—	—	—	—
119	—	—	—	—	—	—	—	—	—	—
120	—	S41	S41	S41	—	S41	S41	—	—	—
121	—	—	—	—	—	—	—	—	—	—
122	—	—	—	—	—	—	—	—	—	—
123	—	—	—	—	—	—	—	—	—	—
124	—	—	—	—	—	—	—	—	—	—
125	—	—	—	—	—	—	—	—	125	—

# Tuning Channels

## Automatic Tune

This TV uses automatic tuning to determine whether or not the TV can receive a broadcast signal which is being sent, and automatically prepares so that the channel selection can respond to direct select modes. Before Automatic Tune, Regional System must already be set (Refer to pages 16).

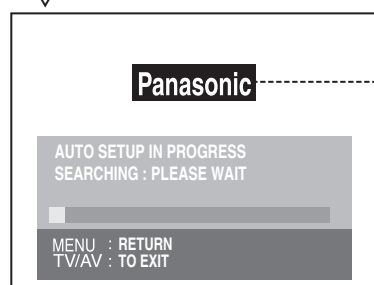
### 1 AUTO TUNE



Press to select the "AUTO TUNE".

Press to access to the "AUTO TUNE".

Search Start.



When a station is found.  
The best tuning position is automatically memorized.

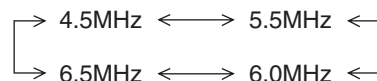
TUNING MENU	
SYS SELECT	AUSTRALIA
AUTO TUNE	ACCESS
MANUAL TUNE	
SOUND SYS	5.5 MHz
COLOUR SYS	AUTO
FINE TUNE	
SKIP	OFF

### 2 SOUND SYS

After all stations are tuned, the on-screen display will automatically change from "AUTO TUNE" to "SOUND SYS" Position.



Press to improve the Sound quality, if the Sound is not clear or no sound is produced on a programme Number Position.



Press to store the Sound System.

TV/AV



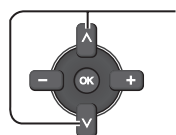
Press to exit from the Tuning Menu.  
This returns the set to the normal viewing condition.

TUNING MENU	
SYS SELECT	AUSTRALIA
AUTO TUNE	
MANUAL TUNE	
SOUND SYS	5.5 MHz
COLOUR SYS	AUTO
FINE TUNE	
SKIP	OFF

#### Note:

When the sound volume is too small to confirm, turn it up by using the sound volume button on the remote control.

### 3



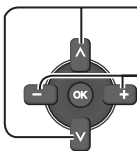
Under the normal viewing condition press to enter each programme Number.  
Confirm the tuning condition.

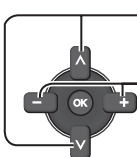
If necessary, repeat step 2 for each Programme Number.

## Manual Tune

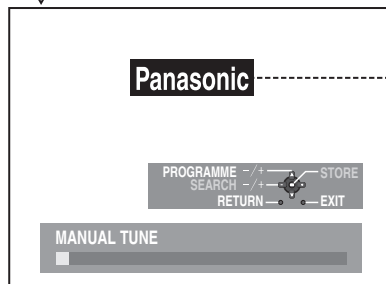
Before Manual Tune, Regional System must already be set (Refer to page 16).

### 1 MANUAL TUNE

- ①
- 
- Press to select the MANUAL TUNE.
- Press to access to the MANUAL TUNE.

- ②
- 
- Press to select the desired Programme Number.
- Press to select the higher or lower channel.

↓ Search Start.



→ When a station is found.

- OK — When the desired station is found, press to store.  
The tuning position is memorized.

- TV/AV — Press to exit from the Tuning Menu.  
This returns the set to the normal viewing condition.

### 2 SOUND SYS

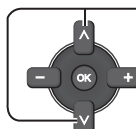
- MENU — Press to display the MAIN MENU, and then to the SETUP menu.



Proceed to the TUNING MENU, and then to the SOUND SYS (refer to page 15).

### 3 Adjust the Sound System (refer to page 18 step 2 to 3).

## Helpful Hint

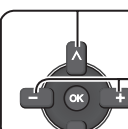
- (1) If a clear picture with correct colours cannot be obtained when a Broadcast or AV signal is received, refer to the “**Colour System Selection**” operation on page 21.
- (2)  After the Manual tune or the Automatic tune is finished, under the normal viewing condition press this button to confirm the tuning condition for each Programme Number. If some Programme Numbers are unused (no TV stations), it is possible to skip such Programme Numbers. Please refer to the Programme Number Skip operation on page 20.
- (3) When using a VCR without video and audio input/output terminals, it is convenient to connect the aerial cable as indicated in the instruction manual of VCR and to set the designated channel to programme No. “0”. In that case, perform manual tune after setting the colour system and sound system in advance. Further, in multi-system VCR, it is more convenient to set the designated channel to several programme Numbers.

# Tuning Channels

## Fine Tuning


Under normal reception conditions this function is not required or necessary.

However, in areas of poor reception or constant interference, a slight adjustment of the tuning may improve the picture and sound quality.

- 

Press to select the FINE TUNE.


Press until the clear picture is received.

- 

Press to store the FINE TUNE.

This stores the FINE TUNE to the selected Programme Number.

- TV/AV



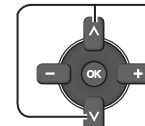
Press to exit from the FINE TUNE.

This returns the set to the normal viewing condition.

TUNING MENU	
SYS SELECT	AUSTRALIA
AUTO TUNE	
MANUAL TUNE	
SOUND SYS	5.5 MHz
COLOUR SYS	AUTO
FINE TUNE	
SKIP	OFF


## How to Cancel the Fine Tuning

Canceling previously adjusted (manually) fine tuning, means re-activating the AFT (Automatic Fine Tuning). Re-activating the Automatic Fine Tuning means allowing the set to automatically tune to the optimum tuning position, for that programme Number.

- 

Select the Programme Number which you would like to return to Automatic Fine Tuning (cancel the manual fine tuning).

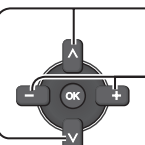
- MENU



Press to display the MAIN MENU, and then to the SETUP menu.

↓

Proceed to the TUNING MENU (refer to page 15).


- 

Press to select the MANUAL TUNE.

Press to access to MANUAL TUNE. Press briefly to tune the best position.

TUNING MENU	
SYS SELECT	AUSTRALIA
AUTO TUNE	
MANUAL TUNE	ACCESS
SOUND SYS	5.5 MHz
COLOUR SYS	AUTO
FINE TUNE	
SKIP	OFF


- OK



Press to store the AFT.

This stores the re-activated AFT.

- TV/AV




Press to exit from the MANUAL TUNE.

This returns the set to the normal viewing condition.


## Programme Number Skip

It is possible to skip Programme Number on which no TV stations are tuned appearing on the screen. The function is only effective when selecting Programme Numbers by pressing the Programme Number Up or Down button either on the TV set or on the Remote control.

- 

Under the normal viewing condition press to select the Programme Number you would like to skip.


- MENU



Press to display the MAIN MENU, and then to the SETUP menu.

↓

Proceed to the TUNING MENU (refer to page 15).

- 

Press to select the SKIP.

Press to change the mode to "ON".


TUNING MENU	
SYS SELECT	AUSTRALIA
AUTO TUNE	
MANUAL TUNE	
SOUND SYS	5.5 MHz
COLOUR SYS	AUTO
FINE TUNE	
SKIP	ON

- OK




Press to store the Skip function.

- TV/AV



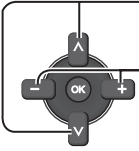
Press to exit from the SKIP.

This returns the set to the normal viewing condition.


- 

Repeat Step 1 to 4 for each Programme Number for which the Skip function is desired.

## How to Cancel the Skip Function

- 

Press to select the SKIP.

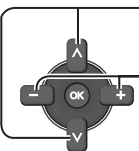
Press to change the mode to "OFF".
- 

Press to store the Skip function.

TUNING MENU	
SYS SELECT	AUSTRALIA
AUTO TUNE	
MANUAL TUNE	
SOUND SYS	5.5 MHz
COLOUR SYS	AUTO
FINE TUNE	
SKIP	OFF

## Sound System Selection (Different region use differing systems)

This function is used only in the TV mode when the sound is not clear or no sound is produced on a Programme Number, and is not applicable in AV mode.

- 

Press to select the "SOUND SYS".

Press until the optimum sound is obtained.

The sound system will change as shown.

→ 4.5MHz ↔ 5.5MHz ↔


→ 6.5MHz ↔ 6.0MHz ↔

Sound System Condition.

TUNING MENU	
SYS SELECT	AUSTRALIA
AUTO TUNE	
MANUAL TUNE	
SOUND SYS	5.5 MHz
COLOUR SYS	AUTO
FINE TUNE	
SKIP	OFF


### Note:

These are different sound broadcast transmission systems applicable to differing countries.

- 

Press to store the Sound System.

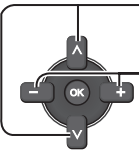
TV/AV



Press to exit from the "SOUND SYS". This returns the set to the normal viewing condition.

## Colour System Selection (Different region use differing systems)

If a clear picture with correct colours cannot be obtained when a Broadcast or AV signal is received, this function is used.

- 

Press to select the "COLOUR SYS".

Press to produce the optimum image.

The colour system will change as shown.

→ AUTO ↔ PAL ↔ SECAM ↔


→ NTSC3.58 ↔ NTSC4.43 ↔

Colour System Condition.

TUNING MENU	
SYS SELECT	AUSTRALIA
AUTO TUNE	
MANUAL TUNE	
SOUND SYS	5.5 MHz
COLOUR SYS	AUTO
FINE TUNE	
SKIP	OFF


### Note:

PAL, SECAM and NTSC 3.58 are different colour signal broadcast transmission systems applicable to differing countries. NTSC 4.43 is a trick playback mode used in special VCR to playback NTSC recorded video tapes through PAL television equipment.

- 

Press to store the Colour System.

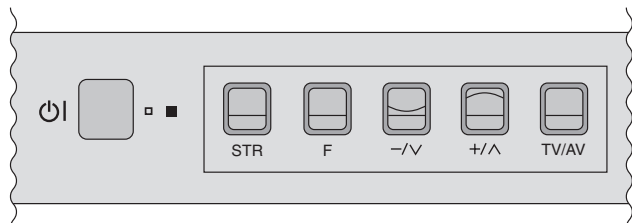
TV/AV


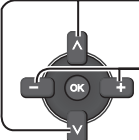



Press to exit from the "COLOUR SYS". This returns the set to the normal viewing condition.

# Owner ID

**Owner ID** allows you to enter a security code (Owner ID) and your personal details into the memory, so that in the unfortunate event of theft it will help the police to trace the owner.




- 1 **MENU**  
 Press to display the MAIN MENU, and then to the SETUP menu.
- 2  Press to select the "Owner ID".  
 Press to access "Owner ID".

If you wish to check the personal details already entered into the TV, press the F  (Front panel) and hold for 5 seconds. The details already entered are displayed on screen.

If **Owner ID** information was not entered when you switched on your TV for the first time or it is necessary to alter some of the information, **Owner ID** can be re-accessed via the **SETUP** menu.

SETUP		
TELETEXT	TOP	==
OFF TIMER	OFF	
CH COLOUR SET		
CHILD LOCK	OFF	
BLUE BACK	ON	
ILLUMINATION	ON	
FLICKER REDUC.	ON	
▼		

SETUP		
3D-COMB	ON	==
PICTURE SHIFT	ON	
TUNING MENU		
<b>OWNER ID</b>	<b>ACCESS</b>	
CONVERGENCE		
▼		

If the **Owner ID** has previously been set, enter the **PIN NUMBER** (using 0 to 9 on the remote control) followed by  to proceed, this will take you to the **NAME** option.

If no **Owner ID** has previously been set, enter the required 4 digit **Owner ID PIN NUMBER** (using 0 to 9 on the remote control).

If a 4 digit **PIN NUMBER** was entered above, you will be taken automatically to the **NAME** line.

If not, move to the **NAME** line by using  or .

Change character by using  or .

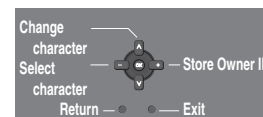
Select character position by using  or .

Repeat above until **NAME**, **HOUSE NUMBER** and **POSTCODE** are entered.

Press  to store the details.

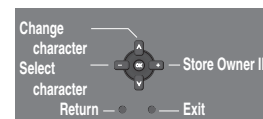
Press again when you are asked, "Are you sure?"

The Owner ID is now stored.



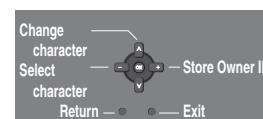
Owner ID	
PIN NUMBER:	***

0123456789



Owner ID	
PIN NUMBER:	****
NAME:	*****
HOUSE NO:	*****
POSTCODE:	*****

0123456789



Owner ID	
PIN NUMBER:	****
NAME:	*****
HOUSE NO:	*****
POSTCODE:	*****

Are you sure?



# Setup Adjustment

- 1** **MENU**  
Press to display the MAIN MENU, and then to the SETUP menu.
- 2**  
Press to select the desired function.  
Press to adjust or change the function.

SETUP	
TELETXT	TOP
OFF TIMER	OFF
CH COLOUR SET	
CHILD LOCK	OFF
BLUE BACK	ON
ILLUMINATION	ON
FLICKER REDUC.	OFF

SETUP	
3D-COMB	ON
PICTURE SHIFT	ON
TUNING MENU	
OWNER ID	
CONVERGENCE	

- 3** **TV/AV**  
Press to go back to watching TV.

## OFF TIMER

Switches the TV off within a preset time which you can choose from between 0 to 90 minutes in 15 minutes intervals.

→ OFF ←→ 15 ←→ 30 ←→ 45 ←→  
→ 90 ←→ 75 ←→ 60 ←→

## CH COLOUR SET

Colour density varying between broadcast channels can be adjusted to three levels for each reception channel.

During AV mode, the appearance of the SETUP MENU will differ from that of the TV mode, with the following function adjustments becoming available.

SETUP	
OFF TIMER	OFF
CH COLOUR SET	
CHILD LOCK	OFF
BLUE BACK	ON
ILLUMINATION	ON
VCR/GAME	OFF
COLOUR SYS	AUTO

## CHILD LOCK

If the Child-Lock function is set ON, picture and sound of the TV/AV mode being viewed will disappear and a Black screen will appear.

## BLUE BACK

You can choose Blue Back display ON or OFF when there is no signal.

## ILLUMINATION

Select "ON" to illuminate the ILLUMINATION LIGHT on the front panel. Otherwise, select "OFF".

## FLICKER REDUCTION

Lets you control any picture movement. Set to ON to activate motion compensation, to smooth the image and get rid of picture movement. Set to Off to have no flicker reduction at all, occasional broadcasts may benefit from using this setting.

ON ←→ OFF

## 3D-COMB

You can choose 3D-COMB function ON or OFF. If the 3D-COMB function is ON, dot interference or cross colour will be reduced.  
**Note:** Not available in component and RGB input.

## PICTURE SHIFT

For use as a screen saver, this function changes the entire picture position (shift) approximately 2 mm every 15 minutes.

## COLOUR SYSTEM

During AV mode, COLOUR SYSTEM is displayed. If a clear picture with current colours cannot be obtained when a Broadcast or AV signal is received, then the colour system will change as shown.

→ AUTO ←→ PAL ←→ SECAM ←→  
→ NTSC3.58 ←→ NTSC4.43 ←→

PAL, SECAM and NTSC 3.58 are different colour signal broadcast transmission systems applicable to differing countries. NTSC 4.43 is a trick playback mode used in special VCR to playback NTSC recorded video tapes through PAL television equipment.

SETUP	
COLOUR MATRIX	SD
3D-COMB	ON
PICTURE SHIFT	ON
OWNER ID	
CONVERGENCE	

## VCR/GAME

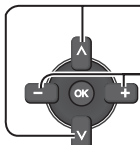
Reproduction of irregular signals, such as certain TV games and rental video tapes, may be improved.

## COLOUR MATRIX

Displays 480p/575p input signals in a natural colour from digital equipment adapters connected to COMPONENT VIDEO INPUT (Y, Pb, Pr) terminals. Select HD or SD to automatically adjust colour parameters for HD (high definition) or SD (standard definition). SD: When the input signal is a normal TV system (NTSC). HD: When the input signal is a High-Definition system.  
**Note:** This feature is available only with 525p/625p (480p/575p) signal and not available with 525i/625i (480i/575i) signal.

# Picture Adjustment

**1** **MENU**  
 Press to display the MAIN MENU, and then to the PICTURE menu.

**2**  
 Press to select the desired function.  
 Press to adjust or change the function.

**3** **TV/AV**  
 Press to go back to watching TV.

PICTURE	
MENU	CINEMA
CONTRAST	
BRIGHTNESS	
COLOUR	
SHARPNESS	
NTSC-TINT	
C. TEMP	STANDARD
D. PNR	AUTO
SCAN MODE	100Hz

## MENU

Picture menu mode will be memorized for each TV, AV1, AV2, AV3 and AV4 mode.

- You can change the level of each Item (CONTRAST, BRIGHTNESS, COLOUR, SHARPNESS, NTSC-TINT, C.TEMP and D.PNR for each Picture Menu (DYNAMIC, STANDARD and CINEMA).

Picture Menu	Function
DYNAMIC	For viewing in brighter environments. This menu selects a higher than normal levels of Brightness and Contrast.
STANDARD	For viewing in normal (evening lighting) environments. This menu selects the normal levels of Brightness and Contrast.
CINEMA	Ideal for movies. Can be selected for VIDEO/COMPONENT.











PICTURE	
MENU	CINEMA
CONTRAST	
BRIGHTNESS	
COLOUR	
SHARPNESS	
NTSC-TINT	
C. TEMP	STANDARD
D. PNR	AUTO
SCAN MODE	100Hz

MENU	DYNAMIC
	↑
MENU	STANDARD
	↑
MENU	CINEMA

## CONTRAST, BRIGHTNESS, COLOUR, SHARPNESS, NTSC-TINT

Increase or decrease the levels of CONTRAST, BRIGHTNESS, COLOUR and SHARPNESS options according to your personal preference.

With an NTSC-TINT signal source connected to the TV, the picture hue can be adjusted to suit your taste.

Item	Effect	Function
<b>CONTRAST</b>	  Less More	Adjust for contrast.
<b>BRIGHTNESS</b>	  Darker Brighter	Adjusts for easier viewing of dark pictures such as night scenes and hair.
<b>COLOUR</b>	  Less More	Adjusts slightly to a lighter colour.
<b>SHARPNESS</b>	  Less More	Displays a sharp image.
<b>NTSC-TINT</b>	  Reddish Greenish	Adjust for proper skin colour.

PICTURE	
MENU	STANDARD
CONTRAST	
BRIGHTNESS	
COLOUR	
SHARPNESS	
NTSC-TINT	
C. TEMP	STANDARD
D.PNR	AUTO
SCAN MODE	100Hz

### Notes:

- When set to Multi PIP mode, the main and sub pictures are both adjusted simultaneously.
- When the TV is receiving NTSC signals, NTSC-TINT is displayed and level adjustment would be possible.
- Only CONTRAST will be displayed during TEXT mode.

## C. TEMP (Colour Temperature)



Set the overall colour tone of the picture.

Press to switch between modes.

→ STANDARD ← → WARM ← → COOL ←

PICTURE	
MENU	DYNAMIC ---
CONTRAST	██████████
BRIGHTNESS	██████████
COLOUR	██████████
SHARPNESS	██████████
NTSC-TINT	██████████
<b>C. TEMP</b>	<b>STANDARD</b>
D. PNR	AUTO
SCAN MODE	100Hz

## D.PNR (Digital Picture Noise Reduction)



Automatically reduces undesired picture noise.

Press to switch between modes.

→ OFF ← → STRONG ←  
→ AUTO ← → WEAK ←

Reduces noise in a channel with many noises.  
Remains off when receiving a strong signal.

Off:Recommended mode when receiving a strong signal.  
Strong:Applies strong noise reductions regardless of input signals.  
Weak:Applies weak noise reductions regardless of input signals.  
Auto:Automatically reduces unwanted picture noise.

PICTURE	
MENU	DYNAMIC ---
CONTRAST	██████████
BRIGHTNESS	██████████
COLOUR	██████████
SHARPNESS	██████████
NTSC-TINT	██████████
C. TEMP	STANDARD
<b>D. PNR</b>	<b>AUTO</b>
SCAN MODE	100Hz

## SCAN MODE

When receiving PAL or SECAM Signal, SCAN MODE is displayed.

Choose the screen refresh method:

Press to switch between modes.

100 Hz MODE ← → PROGRESSIVE



PICTURE	
MENU	DYNAMIC ---
CONTRAST	██████████
BRIGHTNESS	██████████
COLOUR	██████████
SHARPNESS	██████████
NTSC-TINT	██████████
C. TEMP	STANDARD
D. PNR	AUTO
<b>SCAN MODE</b>	<b>100Hz</b>

When receiving PAL or SECAM Signal

MODE	Function
100Hz MODE	100Hz will give a steady picture for most signal transmission.
PROGRESSIVE	Avoids "snaking/jaggy" effect when viewing TV program with moving characters.

### Note:

When viewing a PAL transmission (other than PAL 60) with **Scan mode** set to **Progressive**, the screen will flicker, this is not a fault.




## Helpful Hint (N Normalization)

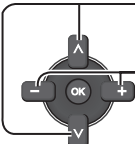
By pressing the Normal "N" Button on the Remote Control while the Picture menu is displayed, the selected menu will be changed to the Normal Mode.


Normalization will not occur if the menu is not displayed when the "N" Button is pressed.

The Normal mode is the factory preset condition. Returning to this original condition is called "Normalization".

# Sound Adjustment

**1** **MENU**  
 Press to display the MAIN MENU, and then to the SOUND menu.

**2**  
 Press to select the desired function.  
 Press to adjust or change the function.

**3** **TV/AV**  
 Press to go back to watching TV.

SOUND	
MENU	MUSIC
VOLUME	
BASS	
TREBLE	
BALANCE	
SURROUND	OFF

## Note:

Some features are only available with the Surround feature switched off. Press  to switch between On and Off.

## MENU

Sound menu mode will be memorized for each TV, AV1, AV2, AV3 and AV4 mode.

- You can change the level of each Item (VOLUME, BASS, TREBLE and BALANCE) for each Sound Menu (MUSIC, CINEMA and NEWS).

SOUND	
MENU	MUSIC
VOLUME	
BASS	
TREBLE	
BALANCE	
SURROUND	OFF

MENU	NEWS
MENU	CINEMA
MENU	MUSIC

Sound Menu	Function
MUSIC	Amplifies the Low frequencies and outputs optimum sound. For music programmes for example.
CINEMA	For movie and drama programmes.
NEWS	Human voices (middle pitch sounds) will sound more clear.

## VOLUME, BASS, TREBLE, BALANCE.

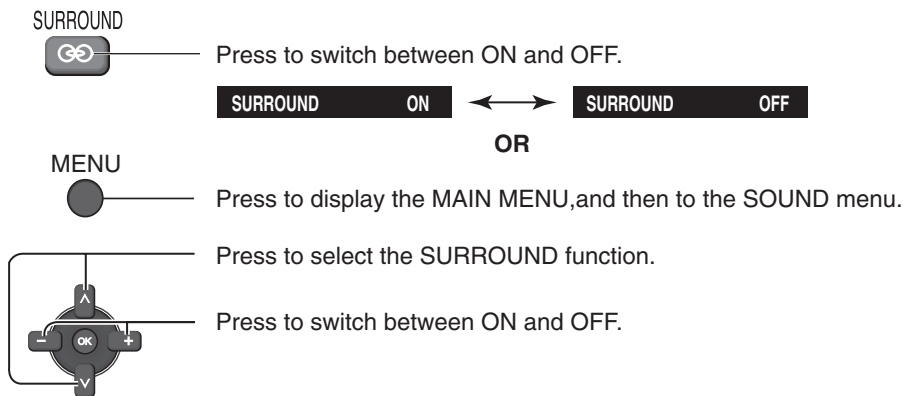
Item	Effect	Function
<b>VOLUME</b>	 Less More	Adjusts output volume.
<b>BASS</b>	 Less More	Adjusts low sounds.
<b>TREBLE</b>	 Less More	Adjusts high sounds.
<b>BALANCE</b>	 Left SP. Right SP.	Adjust left and right volumes.

SOUND	
MENU	MUSIC
VOLUME	
BASS	
TREBLE	
BALANCE	
SURROUND	OFF

## Notes:

- When set to Multi PIP mode, the main and sub sound are both adjusted simultaneously.
- When using one of the double window features, note that the headphones will relay the soundtrack for the programme in the main window, not the smaller window.

## SURROUND MENU



SOUND	
MENU	MUSIC
VOLUME	<div></div>
BASS	<div></div>
TREBLE	<div></div>
BALANCE	<div></div>
SURROUND	ON

The benefits of surround sound are enormous. You can be completely enveloped in sound; just as if you were at a concert hall or cinema. The surround effect can be obtained without the use of external surround speakers.



## Helpful Hint (N Normalization)

By pressing the Normal “N” Button on the Remote Control while the Sound menu is displayed, the selected menu will be changed to the Normal Mode.

Normalization will not occur if the menu is not displayed when the “N” Button is pressed.

The Normal mode is the factory preset condition. Returning to this original condition is called “Normalization”.

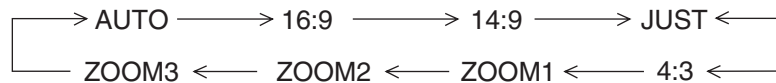
# Aspect Controls




## ASPECT




Press to select the different Aspect options.



### Notes:

- Simply press ASPECT  to display mode information in the top left of the screen. Whilst the on screen selector keys are displayed, use the Red or Green buttons to move in either direction through the eight aspect options.
- 16:9 picture has been used to illustrate all of the aspect modes described in this section.

The on screen selector keys (corresponding to the four coloured buttons on the remote control) appear for some Aspect functions and disappear after a few seconds. If you would like to select an operation when the keys are not shown, press ASPECT  once more and the keys will reappear.

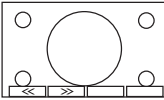
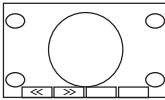
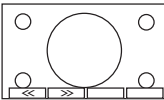
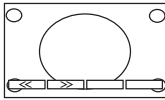
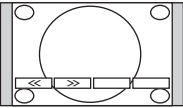
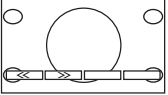
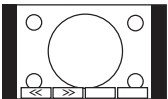
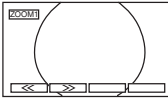



## Helpful Hint (Normalization)

By pressing the Normal “N” Button on the Remote Control while the Aspect menu is displayed, the selected menu will be changed to the Normal Mode.

Normalization will not occur if the menu is not displayed when the “N” Button is pressed.

The Normal mode is the factory preset condition. Returning to this original condition is called “Normalization”.

Mode	Picture	Explanation
AUTO	  <p>16:9 Signal      4:3 Signal</p>	The AUTO position can be set to 16 : 9. When a wide screen signal is detected at the Video terminal the TV will select the 16:9 aspect ratio.
16 : 9	  <p>16:9 Signal      4:3 Signal</p>	The 16:9 option will display the picture at its maximum size. Signals in the 4:3 format will be stretched to fit the picture.
14 : 9		The 14:9 option will display a 4:3 signal in simulated wide screen. The picture is slightly stretched. It is also slightly cropped top and bottom.
JUST		JUST gives you a best fit option when showing 4:3 on wide screen. The centre of the picture is not affected but there is some stretching at the edges.
4 : 3		This option will display a standard 4:3 picture without any stretching or compression. There will be vertical gray lines down either side of the picture.
ZOOM1		This option allows you to magnify the picture.
ZOOM2, ZOOM3		The picture becomes larger and larger when you change the mode ZOOM2 and ZOOM3.

### Notes:

- ASPECT operations cannot be made during progressive (Y, P<sub>B</sub>, P<sub>R</sub>) or 1080i signal input.

# Multi Screen

## Multi PIP



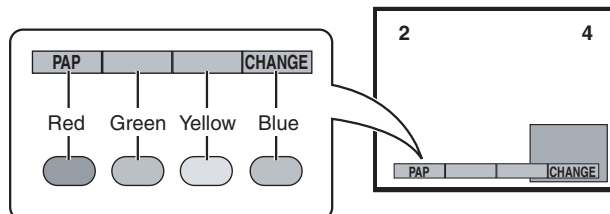
Press **MULTI PIP** to select the current programme, the **picture in picture** feature, or the **picture and picture** feature.

The on screen selector keys for the features (corresponding to the four coloured buttons on the remote control) appear and disappear after a few seconds. If you would like to select an operation when the keys are not shown, press **MULTI PIP** once more and the keys will reappear.

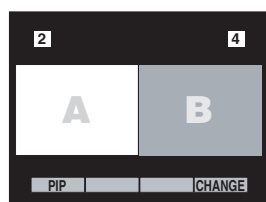
### Picture in Picture (PIP)

Allows two pictures to be viewed at the time. Press the blue button to swap the contents of the two windows.

Use the remote control to select a TV channel or an AV source to appear in the main window.



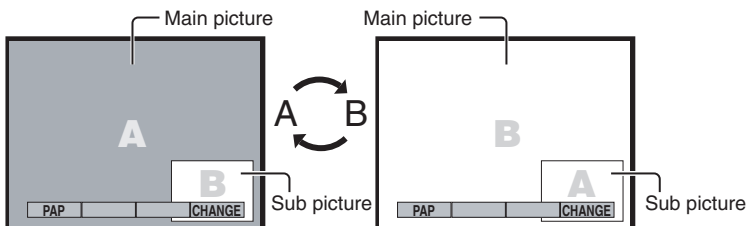
**Press the Red button:**  
Red



**Picture and picture mode**

The screen mode is changed to Picture and Picture (PAP) mode.

**Press the Blue button:**  
Blue

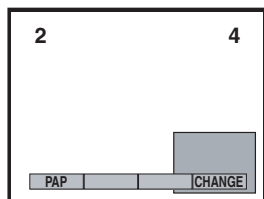


**MULTI PIP**  
Press to exit from the PIP mode.

### Picture and Picture (PAP)

Allows two pictures to be viewed at the same time. Press the blue button to swap the contents of the two windows. Use the remote control to select a TV channel or an AV source to appear in the main window.

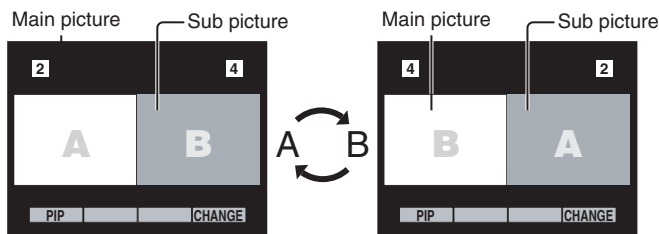
**Press the Red button:**  
Red



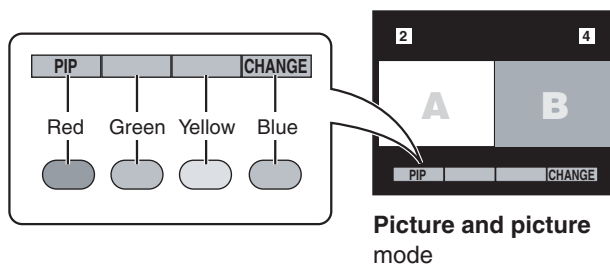
**Picture in picture mode**

The screen mode is changed to Picture in Picture (PIP) mode.

**Press the Blue button:**  
Blue



Each time the main picture and the sub picture are swapped.



**Picture and picture mode**

**MULTI PIP**

Press to exit from the PIP mode.

### Note :

MULTI PIP operations cannot be made during progressive signal input (Y, P<sub>B</sub>, P<sub>R</sub>).



# Multi Screen

## Picture and text

**Picture and text** lets you see the current programme and a page of teletext side by side.

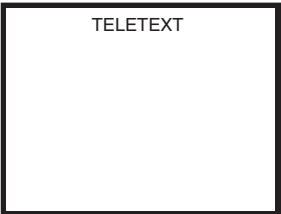
TV/TEXT



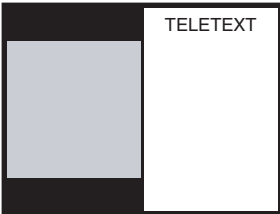
Press to select watching the current programme, the teletext or the **picture and text** feature.

### Note:

The remote control affects the teletext page; so select watching the current programme before making any changes to the programme.



TELETEXT mode



Picture and text mode

## Still

HOLD



STILL

Press to freeze the picture, press again to return to watching the current programme.

# Channel Search

INDEX



CH SEARCH

Press to show freeze-frames of the programmes being broadcast on all of the stored channels. These images are displayed in series, starting from the top left.

HOLD



STILL

Press to pause the search.  
Press again to cancel the pause.

INDEX



CH SEARCH

Re-starts the search.  
Press to exit from the feature.



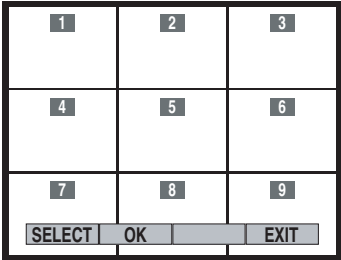
Red

Green

Yellow

Blue

Press to watch the current programme, exiting the feature.  
Press to watch the selected channel, exiting the feature.  
Press to select each channel's playing frame in turn.



Channel Search

# TELETEXT

Teletext features may vary depending on the Broadcasting Companies and are only available when the channel selected transmitting Teletext.

## TV / Teletext mode

TV/TEXT



Press to select the current programme, the teletext and the picture or the teletext feature .

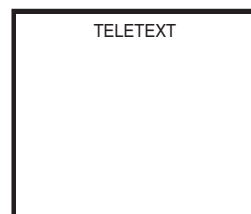
MULTI PIP



During Teletext mode, press to select the teletext feature or the teletext and the picture feature.





Current programme



TELETEXT



Picture and text

- Pressing the **MENU** button whilst in Teletext operation will display the contrast function with a cyan bar, press  to alter the setting as required.
- Pressing the **MENU** button whilst in Teletext operation will display special function options at the bottom of the screen.
- Pressing the **MENU** button whilst in Teletext operation will display the volume function with a green bar, press  to alter the setting as required.

### Note:

If Teletext is in use, the aspect ratio is set to 16:9.

## LIST / TOP mode

Choose 2 modes.

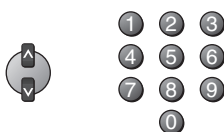
LIST  TOP

LIST mode: Four differently coloured page numbers are situated at the bottom of the screen. Each of these numbers can be altered and stored in the TV's memory.

TOP mode: Four differently coloured subjects are situated at the bottom of the display. To access more information about one of these subjects, press the appropriately coloured button. This facility enables fast access to information on the subjects shown.

# TELETEXT

---



## Page Selection

Pages can be selected in two ways :

- Press the Up / Down buttons to increase or decrease the page number by one.
- By entering the page number, using 0 - 9 on the remote control.



## Full / Top / Bottom

Press the **MENU** button to display special functions, followed by the **Green** button.  
Press the **Green** button again to expand the BOTTOM half.  
Press again to return to normal (FULL) size.



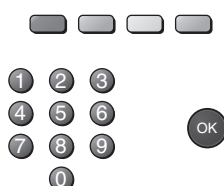
## Reveal

Press the **MENU** button to display special functions, followed by the **Red** button to reveal hidden words e.g., quiz page answers. Press again to hide.



## Red / Green / Yellow / Blue buttons

In TOP mode they correspond to the differently coloured subjects.  
In List mode they correspond to the differently coloured page numbers.



## List Store

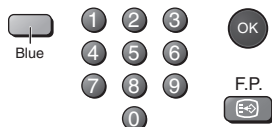
In List mode the four page numbers can be altered (programme positions 1 - 25 only).  
To do this, press one of the four coloured buttons and enter the new page number.  
Press and hold the OK button, the page numbers will change to white indicating that the page is stored.



## HOLD

To hold the Teletext page when viewing multi-page information.  
Press again to return to automatic page update.

It is not possible to change the programme position when in News flash, Update or Sub Coded Page Access operation.



## Favourite Page (F.P.)

Stores a favourite page in memory for instant recall. To store such a page, the TV must be in List mode, and the programme position must be from 1 - 25.

Press the **Blue** button, select the page number, then press and hold the **OK** button. The page number is now stored.

Press **F.P.** to recall this page.

## Update Display

Press the **MENU** button to display special functions, followed by the **Yellow** button to view the TV picture whilst searching for a Teletext page. When found, the screen will display the page number at the top left. Press the **Yellow** button to view the page.

Press the **TV/TEXT** button again to return to normal TV operation.

## News Flash

When a news flash page has been selected, press the **MENU**, **Yellow** buttons, to view the TV picture. When an update is received, the page number will be displayed on screen.

Press the **Yellow** button to display the News Flash.

Press the **TV/TEXT** button to return to normal TV operation.

## Update

Press the **MENU**, **Yellow** buttons to see the update of information on certain pages. When an update is received, the page number will be displayed at the top left of the screen.

Press the **Yellow** button to view the page.

Press the **TV/TEXT** button to return to normal TV operation.



## Accessing sub pages

When Teletext information exceeds one page, it may take some time for the automatic changing of the sub pages to reach the sub page you require. As each sub page is found its number is displayed at the top of the page so that you may select it; as more sub pages are picked up, the display at the top of the page changes, so that you are always offered the most recently transmitted selection of sub pages.



MENU



Yellow



In Teletext operation, use the following procedure to access sub pages:

If the sub page you want to look at is not yet available, press the **MENU** button (to display special functions) followed by the **Yellow** button to view the TV picture whilst waiting for more sub pages to be found. The sub pages found will be displayed across the top of the screen.

When the sub page you are waiting for is available press the **Yellow** button to return to viewing the Teletext pages, then use the left and right cursor buttons to select the sub page of your choice.

### Notes:

- If you do not want to display the on screen selector keys on the TV picture whilst waiting for a sub page to be found, press the **MENU** button to clear the keys from the screen. Press again to redisplay the keys.
- If you have cleared the special function keys from the screen and then used the left and right cursor buttons to select a sub page, whilst still viewing the TV picture, you must press the **MENU** button then the **Yellow** button to display the Teletext page again.
- If the top of the page indicates that sub pages are being transmitted but the page displayed never changes, then the 'sub page number' is there to show the page contents have been updated, there are no sub pages.

Alternatively, if you know which sub page you require, press the **MENU** button (to display special functions) followed by the **Blue** button; T\*\*\*\* will be displayed where the page number is normally found.

Enter desired sub page number before the T\*\*\*\* disappears.

e.g., to select page 6 enter 0, 0, 0 and 6.

Press the **Yellow** button to view the TV picture whilst waiting for more sub pages to be found. The sub pages found will be displayed across the top of the screen.

When the page is available, press the **Yellow** button to view the page. Regardless of how many pages are found, pressing the **Yellow** button will take you to the sub page which you requested.

Press the **TV/TEXT** button to return to normal TV operation.

MENU



Blue



## INDEX

### When in TOP operation

Press the **INDEX** button to return to the main index page.

Depending on the way information is transmitted, this may have to be pressed more than once to return to the main index page.

INDEX



# Advanced Remote Control Operation

## Stereo / Bilingual Sound Selection



When you receive the stereo / bilingual sound system, sound output modes can be selected by pressing the **Stereo / Bilingual Sound Selection** button.

Audio Signal	STEREO	MAIN I	SUB II	MONO
Mode Indicator		I	II	

**NICAM** .....Used in New Zealand, Singapore, Hong Kong etc.

Type of broadcast	Regular broadcast (Standard Audio)	Regular + NICAM MONO I (MAIN I)	NICAM STEREO	NICAM DUAL MONO (MAIN I / SUB II)
Mode Indicator	No Indicator $\longleftrightarrow$	I $\longleftrightarrow$	$\longleftrightarrow$	

**A2(German)** .....Used in Australia, Malaysia etc.

Type of broadcast	Regular broadcast (Standard Audio)	BILINGUAL or DUAL MONO: MAIN I / SUB II	STEREO
Mode Indicator	No Indicator $\longleftrightarrow$	I $\longleftrightarrow$ II	$\longleftrightarrow$

### Notes:

- If the stereo signal is poor or the receiving conditions are not optimum or if STEREO:MONO automatic switching occurs, it is recommended you switch from STEREO to MONO.
- Even when the contents of the receiving signal undergo changes, selection mode is kept intact.
- When the receiving conditions deteriorate, listening will be easier if the mode is set to the MONO position, using the stereo / bilingual sound selection button.
- DUAL, also known as DUAL MONO or as BILINGUAL is not currently transmitted in some countries.

## VCR / DVD control

The Remote Control is capable of operating some functions of selected VCR and DVD (Digital Versatile Disc) equipment. Some VCR and DVD equipment have different functions, so to ensure compatibility please refer to the equipment's instruction book or consult your dealer for details.



Button	Function
	Standby
	VCR / DVD selection switch
	Play
	Stop
	VCR : Fast Forward / Cue DVD : Slow / Search
	VCR : Rewind / Review DVD : Slow / Search
	Pause / Still
	VCR : Programme Number up / down DVD : Skip
	Record

## Manufacturer setting

Remote Control Operation is possible for the Panasonic VCR's and DVD's equipment.  
After completion of setting, execute the various operations after pressing the VCR / DVD selection switch.

Switch to select VCR or DVD.

While pressing the VCR / DVD Power button, press the manufacturer code  
(enter the two digit code), and press the VCR / DVD Stop button.

### VCR

Manufacturer	Code
Panasonic/ National	10,11,12,13

### DVD

Manufacturer	Code
Panasonic	70, 71

VCR DVD













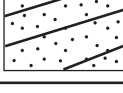







### Notes:


- After setting, execute operation confirmation. If there is no operation, set a different code.
- The respective VCR / DVD code is cancelled when battery has been exchanged. Please set it again.
- Depending on the model, operation of VCR's or DVD's of the manufacturers listed above may not be possible.
- In some cases, new products may not be operative.
- It will not operate with other than the above manufacturers.

# Troubleshooting

Before you call for service, determine the symptoms and make a few simple checks as shown below.

Symptoms		Checks
Picture	Sound	
 Snowy Picture	 Noisy Sound	Aerial Location, direction or Connections
 Multiple Image	 Normal Sound	Aerial Location, direction or Connections
 Interference	 Noisy Sound	Electrical Appliances Cars/Motorcycles Fluorescent Lamps
 Normal Picture	 No Sound	Volume (Refer to page 10, 11) (Check whether the mute function has been activated on the Remote Control.)
 No Picture	 No Sound	Not plugged into AC outlet Not switched on Contrast and Brightness/Volume setting (Check by pressing the Power Switch or Stand-by Button on the Remote Control.)
 No Colour	 Normal Sound	Colour Control (Refer to page 24, 25) Colour System (Refer to page 21)
 Scrambled	 Normal or Weak Sound	Retune Channels (Refer to page 15)
 Coloured Patches	 Normal Sound	Magnetic interference from unshielded equipment; TV set moved while "ON" Turn the TV set off for 30 minutes, using the "Power" Switch on the TV set.
 No Colour	 Noisy Sound	Sound System (Refer to page 21) Colour System (Refer to page 21)

## Projection TV screen

Symptoms	Checks
 <p>After-images appear</p>	<p>Do not allow a still picture to be displayed for an extended period, as this can cause a permanent after-image to remain on the Projection TV screen. Examples of still pictures include logos, video games, computer images, teletext and images displayed in 4:3 mode.</p> <p><b>Note:</b> The permanent after-image on the Wide Projection TV screen resulting from fixed image use is not an operating defect and as such is not covered by the Warranty. This product is not designed to display fixed images for extended periods of time.</p>



# Cleaning

To ensure continued excellent performance by this product, periodic cleaning is recommended.

	<p>The unit contains many plastic parts. For this reason <b>DO NOT</b> use benzine, thinner or other chemicals to clean the unit.</p>		<p>Dust will accumulate on the picture screen. Please wipe with a soft cloth from time to time. If you use a chemically treated cloth, please be careful to follow the instructions that come with the cloth.</p>
	<p><b>DO NOT</b> bring into contact with insecticide or other volatile substances. <b>DO NOT</b> allow the unit to come into contact for extended periods with rubber or vinyl products.</p>		<p>Remove dirt and soiling by wiping with a light cloth. Even if the unit is heavily soiled, do not apply cleaner directly to the unit. Soak a cloth in a solution of neutral cleanser thinned with water. Then wring out the cloth, wipe the unit clean, and finish by wiping with a dry cloth. Do not use any type of cleansers on the picture screen.</p>

# Specifications

Power Source	AC 220-240 V, 50/60 Hz				
Power Consumption	Stand-by condition: less than 1 W Normal viewing 165 W				
Dimensions ( W × H × D )	1095 mm x 1203.5 mm x 538 mm				
Mass (Weight)	56 kg (Net)				
Remote control Transmitter	N2QAJB000109 R6 (AA) Battery × 2				
Receiving System					
21 Systems		Function	21 Systems		Function
1	PAL B, G, H	Reception of broadcast transmissions and Playback from Video Cassette Tape Recorders.	15	PAL 60 Hz/5.5 MHz	Playback from Special Disc Players and Special VCR's
2	PAL I		16	PAL 60 Hz/6.0 MHz	
3	PAL D, K		17	PAL 60 Hz/6.5 MHz	
4	SECAM B, G		18	SECAM 60 Hz/5.5 MHz	
5	SECAM D, K		19	SECAM 60 Hz/6.0 MHz	
6	SECAM K1		20	SECAM 60 Hz/6.5 MHz	
7	NTSC M (NTSC 3.58/4.5 MHz)		21	NTSC 50 Hz/4.5 MHz	
8	NTSC 4.43/5.5 MHz	Playback from Special VCR's			
9	NTSC 4.43/6.0 MHz				
10	NTSC 4.43/6.5 MHz				
11	NTSC 3.58/5.5 MHz				
12	NTSC 3.58/6.0 MHz				
13	NTSC 3.58/6.5 MHz				
14	SECAM I				
Receiving Channels	Regular TV <b>VHF BAND</b> 2-12 (PAL/SECAM B, K1) 0-12 (PAL B AUST.) 1-9 (PAL B N.Z) 1-12 (PAL/SECAM D) 1-12 (NTSC M Japan) 2-13 (NTSC M U.S.A) <b>UHF BAND</b> 21-69 (PAL G, H, I/SECAM G, K, K1) 28-69 (PAL B AUST.) 13-57 (PAL D, K) 13-62 (NTSC M Japan) 14-69 (NTSC M U.S.A) <b>CATV</b> S1-S20 (OSCAR) 1-125 (U.S.A CATV) C13-C49 (JAPAN) S21-S41 (HYPER) Z1-Z37 (CHINA) 5A, 9A (AUST.)				
Receiving Stereo System	NICAM I , NICAM B/G, NICAM D, A2 (German)				
Tuning System	Frequency synthesizer      Auto Search Tuning DIRECT                              : 125 Position				
Audio Output	24 W [ 12 W + 12 W ] ( 10 % THD )				
Speaker System	Woofer × 2 + Tweeter × 2				
Headphones	3.5 mm Plug × 1				
Aerial Impedance	75 Ω   Unbalanced coaxial				
Operating Conditions	Temperature: 0°C - 40°C Humidity: 20% - 80% RH (non-condensing)				
Video/Audio/Component Terminals	AV 1, 2, 3, 4                              S Video In                              Y:1 Vp-p, 75 Ω 				

**Note:** Design and Specifications are subject to change without notice. Weight and Dimensions shown are approximate.

**Customer's Record**

The model number and serial number of this product can be found on its cabinet. You should note this serial number in the space provided below and retain this book plus your purchase receipt as a permanent record of your purchase to aid in identification in the event of theft or loss and for Warranty Service purposes.

Model Number      TX-47P950A

Serial Number \_\_\_\_\_